

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. 94-163

NPDES NO. CA0083526

STORM WATER PERMIT  
FOR  
CITY OF MODESTO  
STANISLAUS COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. The City of Modesto (hereafter Discharger) submitted a Part 1 Application transmitted by letter dated 18 May 1992, and a Part 2 Application transmitted by letter dated 11 May 1993 for issuance of a storm water permit under the National Pollutant Discharge Elimination System (NPDES) to implement a "Storm Water Management Program", (hereafter Program) dated 17 May 1993.
2. The Part 2 Application included a section entitled Proposed Stormwater Management Program plus the following additional sections: Legal Authority, Proposed Schedule for Estimating Seasonal Loads for Major Outfalls, Proposed Long Term Monitoring Program, Proposed Assessment and Reporting Activities, Fiscal Analysis and Signatory and Certification Requirements. The Discharger's Stormwater Management Program shall include the sections listed above plus other applicable parts of the Part 2 Application, dated 17 May 1993, and any modifications, revisions or amendments to the Program.
3. The Discharger has ten individual watersheds with 18 major outfalls that discharge to Dry Creek, the Tuolumne River or MID Lateral Canal No. 3. MID Lateral No. 3 is tributary to the Stanislaus River, or it may be diverted into the Tuolumne River or the San Joaquin River. The two natural watersheds are the Tuolumne River and Dry Creek Watershed (Attachment A). The City is at the confluence of Dry Creek and the Tuolumne River.
4. About one-third of the City area discharges storm water to surface water; the remaining two-thirds discharges to rock wells. Areas of the City that discharge to surface waters are generally the older areas or those areas immediately adjacent to the Tuolumne River, Dry Creek or canals. The total area of the City that discharges to

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receiving waters is about 6,500 acres. Of this acreage, about 35 percent discharges to the Tuolumne River, 50 percent to Dry Creek, and 15 percent to canals.

5. The Board adopted a Water Quality Control Plan, Second Edition, for the San Joaquin Basin (hereafter Basin Plan) which contains water quality objectives for waters of the Basin. These requirements implement the Basin Plan.
6. The beneficial uses of the Tuolumne River downstream of storm water discharges are municipal and domestic, and agricultural supply; water contact and noncontact recreation; esthetic enjoyment; and preservation and enhancement of fish, wildlife and other aquatic resources.
7. The beneficial uses of the underlying ground water are municipal and domestic, industrial, and agricultural supply.
8. The City collected storm water runoff samples from three storms at five locations during the 1992-93 rain season.

The conventional constituents (physical parameters, oxygen demanding substances, and nutrients) were all detected in the runoff. With the possible exception of oxygen demanding substances in the early rain season, no other conventional constituent concentrations were at levels likely to significantly affect the receiving streams. The source of high oxygen demand in the early rain season is thought to be decaying organic matter from the annual fall leaf drop.

Most of the trace metals analyzed were detected infrequently. Copper, lead, and zinc in storm water, however, were detected consistently. There appears to be considerable dilution potential available in the Tuolumne River for copper and zinc. Copper, lead, and zinc are potentially of more concern to Dry Creek, particularly during the early rain season when storm water discharge may make up most of the flow in Dry Creek. Later in the rain season, Dry Creek has considerably more capacity to dilute the City's storm water discharges.

Few of the organic constituents analyzed were detected. Organo-phosphate pesticides were not tested for. Testing for organo-phosphate pesticides is added to the monitoring program. Oil and grease as well as phenols were detected in a number of samples. Phenols were detected at low levels. An insecticide was detected in one sample and a solvent was detected in one sample. Fecal bacteria which may measure either human or animal waste, were detected in all runoff samples at relatively high counts.

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There is a definite seasonal trend in runoff pollutant concentrations. In general, the longer the period of dry days preceding a storm event (generally typical of the early rain season), the higher the pollutant concentrations.

The City has examined water quality data from their municipal wells in the rock well area and positive storm drainage area and has observed no pollutants in their well water attributable to storm water runoff.

9. Section 402(p) of the Clean Water Act (CWA), as amended by the Water Quality Act of 1987 (WQA), requires NPDES permits for storm water discharges from separate municipal storm drain systems and prohibits non-storm water discharges into these systems. On 16 November 1990, the Environmental Protection Agency (EPA) published regulations for storm water discharges pursuant to Section 402(p) of the CWA. The permit application package from the City was prepared to meet the Regional Board's requirements and to satisfy EPA's regulations on applying for an NPDES permit for storm water discharges from separate municipal storm drain systems.
10. The Program represents the City's proposal over the next five-year period of the NPDES permit to reduce the discharge of pollutants to municipal storm drains to the maximum extent practicable. The Program emphasizes pollution prevention through the following program elements:
  - Program administration and comprehensive planning
  - Public education and participation
  - Commercial and residential area source control
  - Illicit discharges
  - Industries
  - Construction

The scope of each program element, responsible City of Modesto staff, and estimated costs are described in the Program for a five-year period beginning with the fiscal year 1993-94.

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The City will discuss the following year's program annually and submit a revision implementation plan for the next year's work as part of an annual report from the City.

11. The goal of the City's Program is to eliminate illicit discharges and reduce pollutants to the maximum extent practicable in storm water discharges. Illicit discharges are considered to consist of illicit non-storm water physical connections to the storm drain system; dumping of chemicals, waste or debris into storm drain inlets; and sanitary seepage.

Criteria considered by the City in selecting a program to reduce storm water pollutants to the maximum extent practicable include:

- a. Mitigation of pollutants which exceed water quality objectives, or of a known significant problem
  - b. Technical feasibility and effectiveness
  - c. Cost-effectiveness
  - d. Public priorities and public acceptance
  - e. Consistency with the National and State storm water program objectives, as those objectives continue to be modified
12. The permitted discharge is consistent with the anti-degradation provisions of 40 CFR 131.12 and State Board Resolution 68-16.
  13. This Order requires implementation of programs to reduce the level of pollutants in storm water discharges. However, given the continuing development within the area, it is possible that future degradation in water quality could occur. Any such change in water quality will not unreasonably affect the present and anticipated beneficial use of water and will not result in water quality less than that prescribed in policies of the State Board. The programs required pursuant to this Order constitute the best practicable treatment or control of discharges necessary to assure that a pollution or nuisance will not occur and the highest quality consistent with maximum benefit to people of the State will be maintained.

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14. The Program is an integral and enforceable component of this Order. The title page and table of contents of the Program are included in Attachment B of this Order. The Program and other information contained in the Discharger's application package are found by the Board to satisfy EPA's NPDES permit application requirements for municipal stormwater discharges.
15. This Order requires evaluation of existing water quality impacts from urban storm water runoff discharges, and the implementation and evaluation of the Program to reduce the discharge of pollutants into storm water runoff to the maximum extent practicable (MEP) to improve water quality and protect beneficial uses. Implementation of the Program to reduce pollutants loads from industrial and construction sites, new developments and existing urbanized areas are required as part of this permit. Additionally, this Order requires that the effectiveness of the Program in reducing the discharge of pollutants, attaining water quality objectives and protecting beneficial uses be evaluated.
16. It is not feasible at this time to establish numeric limits for pollutants in storm water discharges from municipal storm sewer systems. Therefore, the effluent limitations in the Order are narrative, and include the requirement to reduce pollutants in storm water discharges to the MEP. This Order requires the implementation of Best Management Practices (BMPs), identified in the Program, to control and abate the discharge of pollutants in storm water discharges. Implementation of BMPs, in accordance with the Program and its schedule, constitutes compliance with MEP requirements, and with requirements to achieve water quality standards.
17. Section 402(p)(4)(B) of the Clean Water Act requires that the Discharger shall be in full compliance with this Order as expeditiously as practicable, but in no event later than three (3) years after the date of issuance of this Order.
18. The Regulations require that the Program be implemented during the entire duration of the Order (40 CFR 122.26(d)(2)(iv)), which is five (5) years. Implementation of the Program, in accordance with its schedule, will result in substantial compliance being achieved within three (3) years.

The Discharger shall demonstrate substantial compliance with the Program and Order through the information and data supplied in the Annual Report.

19. The Board will issue a separate NPDES storm water permit to Caltrans which maintains right-of-way for several surface streets (Highways 108 and 132) and one freeway (Highway 99) within the City, which may not be subject to direct regulation by the City.

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20. The action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21100, et seq.), in accordance with Section 13389 of the California Water Code.
21. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
22. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
23. This Order shall serve as an NPDES permit pursuant to Section 402 of the CWA, and amendments thereto, and shall take effect upon the date of hearing, provided EPA has no objections.

**IT IS HEREBY ORDERED** that the City of Modesto, its agents, successors and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

**A. Discharge Prohibitions:**

1. The Discharger shall effectively prohibit discharge of non-storm water through their systems into waters of the United States. NPDES permitted non-storm water discharges are exempt from this prohibition. The following non-storm water discharges need not be prohibited provided such sources are identified and appropriate control measures to minimize the impacts of such sources, are developed under the Storm Water Management Program:
  - a. water line flushing;
  - b. landscape irrigation;
  - c. diverted stream flows;
  - d. rising ground waters;

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- e. uncontaminated ground water infiltration [as defined in 40 CFR 35.2005(20)] to separate storm sewers;
  - f. uncontaminated pumped ground water;
  - g. discharges from potable water sources;
  - h. foundation drains;
  - i. air conditioning condensate;
  - j. irrigation water;
  - k. springs;
  - l. water from crawl space pumps;
  - m. footing drains;
  - n. lawn watering;
  - o. individual residential car washing;
  - p. flows from riparian habitats and wetlands;
  - q. dechlorinated swimming pool discharges;
  - r. discharges or flows from emergency fire fighting activities;
  - s. street washwater.
2. The discharge shall not cause underlying ground water to be degraded.

**B. Effluent Limitations:**

- 1. The Discharger shall reduce the discharge of pollutants from municipal storm sewers to the maximum extent practicable.

**C. Receiving Water Limitations:**

Receiving Water Limitations are based upon water quality objectives contained in the Basin Plan. As such, they are a required part of this permit.

The discharge shall not cause the following in the receiving water:

1. Oils, greases, waxes, or other materials to form a visible film or coating on the water surface or on the stream bottom.
2. Oils, greases, waxes, floating material (liquids, solids, foams, and scums) or suspended material to create a nuisance or adversely affect beneficial uses.
3. Esthetically undesirable discoloration.
4. Fungi, slimes, or other objectionable growths.
5. Deposition of material that causes nuisance or adversely affects beneficial uses.
6. Taste or odor-producing substances to impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to cause nuisance or adversely affect beneficial uses.
7. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.
8. Toxic pollutants to be present in the water column, sediments, or biota in concentrations that adversely affect beneficial uses; that produce detrimental response in human, plant, animal, or aquatic life; or that bioaccumulate in aquatic resources at levels which are harmful to human health.
9. Violation of any applicable water quality objective for receiving waters adopted by the Board or the State Water Resources Control Board pursuant to the CWA and regulations adopted thereunder. If different water quality objectives are adopted after the date of adoption of this Order, the Board may revise and modify this Order as appropriate.



**D. Provisions:**

1. The Discharger shall demonstrate compliance with this Order through the timely implementation of BMPs and other actions to reduce pollutants in storm water discharges in accordance with the Program, and any of its modifications, revisions, or amendments. The Program, and any modifications or revisions to the Program that are approved in accordance with Provision 9 of this Order, is an enforceable component of this Order.
2. The Discharger shall adopt requirements as described in the Program that effectively prohibit non-storm water discharges into the storm drains and require controls to reduce the discharge of pollutants to the maximum extent practicable.
3. The Stormwater Management Program shall include Legal Authority, Proposed Schedule for Estimating Seasonal Loads for Major Outfalls, Proposed Long-Term Monitoring Program, Proposed Stormwater Management Program, Proposed Assessment and Reporting Activities, Fiscal Analysis, Signatory and Certification Requirements, other applicable parts of the Part 2 Application, dated 17 May 1993, and any modifications, revisions or amendments to the Program.
4. Within **90 days after adoption of this Order** the Discharger shall submit for Regional Board staff approval a program to monitor and control pollutants from industrial facilities. The program shall identify facilities found to be a significant source of pollutants. It shall include provisions to inspect, monitor and control pollutants from those facilities identified. The approved program is a part of the Stormwater Management Program.
5. By **1 July 1994**, the Discharger shall amend the City's Storm Drainage Ordinance such that it will ensure compliance with the State Water Resources Control Board NPDES General Construction Activity Storm Water Permit for construction projects greater than five acres. A copy of the amended ordinance shall be submitted to the Board by **1 September 1994**.

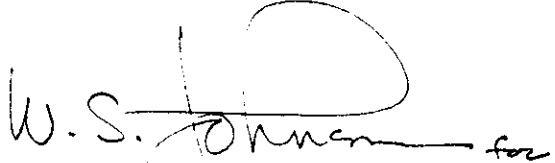
6. By **1 July 1995**, the Discharger shall submit as part of the annual report an evaluation of whether erosion control for construction projects less than five acres is needed. If the Discharger determines that erosion control is needed for projects less than five acres, the Discharger shall implement the construction program outlined in the Stormwater Management Program.
7. By **1 July** of each year, the Discharger shall submit an annual report with a detailed compilation of all deliverables and milestones completed as described in the Program. It shall document the status of completion of all the Program's tasks, list problems encountered, and proposed solutions. The annual report shall contain an assessment of legal authority to ensure the City has adequate legal authority to operate its Program. The annual report shall contain an evaluation of the effectiveness of the Program. Measures of effectiveness include, but are not limited to, an estimate of reduction of pollutants, evaluation of monitoring results, detailed accounting of Program accomplishments, assessment measures in Table 8-1 of the Program, and fiscal analysis, including funds expended and staff hours utilized. The estimate of reduction of pollutants shall be made through the direct measure of water quality concentrations or pollutant loads. In addition, the Discharger shall submit for Regional Board staff approval, the plans and schedule of implementation for the upcoming year, and format for the next annual report.
8. In their annual report the Discharger shall demonstrate that they are in substantial compliance with the Program.
9. It is anticipated that the Program may need to be modified, revised or amended from time-to-time to respond to changed conditions and to incorporate more effective approaches to pollutant control. Requests for changes may be initiated by the Regional Board's Executive Officer or by the Discharger. Major revisions to the program would be brought before the Board as permit amendments. Minor changes may be made with the Executive Officer's approval and will be brought to the Board as information items. Such proposed changes shall be submitted to the Regional Board as technical reports as needed.

10. This Order may be modified, or alternately revoked or reissued, prior to the expiration date as follows:
  - a. to address changed conditions identified in the required technical reports or other sources deemed significant by the Board;
  - b. to incorporate applicable requirements of statewide water quality control plans adopted by the State Board or amendments to the Basin Plan;
  - c. to comply with any applicable requirements, guidelines, or regulations issued or approved under Section 402(p) of the CWA, if the requirement, guideline, or regulation so issued or approved contains different conditions or additional requirements not provided for in this Order. The Order as modified or reissued under this paragraph shall also contain any other requirements of the CWA then applicable.
11. The Discharger shall comply with the attached Monitoring and Reporting Program No. 94-163, which is part of this Order, and any revisions thereto, as ordered by the Executive Officer.
12. All applications, reports, or information submitted to the Board shall be signed and certified pursuant to EPA regulations 40 CFR 122.41(k).
13. The Dischargers shall comply with all applicable items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES)", dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provisions".
14. This Order expires on **24 June 1999** and the Discharger must file a Report of Waste Discharge in accordance with Title 23, CCR, not later than 180 days in advance of such date in application for renewal of waste discharge requirements if it wishes to continue to discharge.

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I, WILLIAM H. CROOKS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 24 June 1994.

  
WILLIAM H. CROOKS, Executive Officer

SPD:ldj:AMENDED/30 June 1994

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION**

**MONITORING AND REPORTING PROGRAM NO. 94-163**

**NPDES NO. CA0083526**

**FOR  
STORM WATER PERMIT  
FOR  
CITY OF MODESTO  
STANISLAUS COUNTY**

**STORM WATER MONITORING**

Storm water monitoring shall be conducted according to the proposed Long-Term Monitoring Program in Section 5 of the Part 2 Application, dated 17 May 1993. Monitoring shall be conducted at the location and frequency listed on page 5-7, and tested for the constituents and detection levels on Table 5-2 in Section 5 of the Application. Also, monitoring shall be conducted according to Provision D.4 of this Order. In addition, monitoring for organo-phosphate pesticides by EPA Method 614 at a detection level of  $0.1 \mu\text{g/l}$  ( $0.1 \text{ ppb}$ ) shall be conducted at the location and frequency listed on page 5-7.

**RECEIVING WATER MONITORING**

Receiving water monitoring shall be conducted at the locations, frequency, for constituents and detection levels on page 5-10 and 5-11 in Section 5 of the Application. In addition, monitoring for organo-phosphate pesticides by EPA Method 614 and detection level  $0.1 \mu\text{g/l}$  shall be conducted at the receiving water locations and frequency also on page 5-10 and 5-11 in Section 5 of the Application.

**CHRONIC TOXICITY TESTING**

If organo-phosphate pesticides are found in Dry Creek or the Tuolumne River at levels found to cause chronic toxicity, the City shall submit a plan and schedule for Regional Board staff approval to conduct chronic toxicity testing.

**REPORTING**

The Discharger shall submit by **1 July of each year** an annual report to the Board with a summary of the monitoring data obtained during the previous season. The data shall be arranged in tabular form so that the date, the constituents and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether a reduction of pollutants has been achieved through the direct measure of water quality concentrations or pollutant loads.



MONITORING AND REPORTING PROGRAM  
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The annual report shall also contain the items in Provision D.7 and D.8 of this Order.

All reports submitted in response to this Order shall comply with the signatory requirements of Provision D.12 of this Order.

The Discharger shall implement the above monitoring program on the first day of the month following the effective date of this Order.

Ordered By: W.S. Johnson

WILLIAM H. CROOKS, Executive Officer

24 June 1994

(Date)

SPD:ldj:AMENDED\29 June 1994





## **INFORMATION SHEET**

### **STORM WATER PERMIT CITY OF MODESTO STANISLAUS COUNTY**

The City of Modesto submitted a Part 1 Application transmitted by letter dated 18 May 1992, and a Part 2 Application, dated 17 May 1993, for issuance of a storm water permit under the National Pollutant Discharge Elimination System (NPDES) to implement a "Storm Water Management Program".

The Storm Water Management Program consists of a series of activities designed to implement and evaluate control measures to reduce pollutants in runoff to the maximum extent practicable. The activities include: an illicit discharge identification and elimination program; enhancement of municipal activities, such as street sweeping and leaf pick-up; an industrial runoff control program, including inspections; a program of public information and public participation; commercial and residential area source control; the evaluation of detention basins; pollutant controls on new development and construction sites, and ongoing monitoring program.

The Federal Water Pollution Control Act (Clean Water Act), as amended by the Water Quality Act of 1987, Section 402(p), requires municipalities of 100,000 population or greater which have discharges from separate storm sewer systems to obtain NPDES permits for these discharges. Permits are also required for discharges which are determined to contribute to a violation of a water quality standard (objective) or are a significant contributor of pollutants. Section 402(p) provides that permits shall include a requirement effectively prohibiting non-storm water discharges to storm sewers, and shall require controls to reduce the discharge of pollutants to the maximum extent practicable. EPA promulgated regulations on 16 November 1990 on NPDES permit application requirements, including the development of storm water management programs for municipal storm water discharges. The Discharger's application and this permit satisfy the intent of the Section 402(p) requirements.

Federal Code of Regulations, Title 40 - Protection of Environment, Chapter 1, Environmental Protection Agency, Subchapter D, Water Programs, Parts 122-125 (hereafter referred to as 40 CFR specific Part number).

40 CFR Parts 122-125 contain promulgated regulations pertaining to the NPDES application, permit conditions, and program requirements.

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**Rationale for Requirements**

Discharge Prohibition A.1

This Prohibition reflects the CWA Section 402(p) requirement of effectively prohibiting non-storm water discharges to storm sewers. Effectively prohibiting means that non-storm water discharges shall be specifically regulated by an NPDES permit or that the discharge is not considered a waste or does not contain constituents of concern, in which case an NPDES permit would not be required.

Effluent Limitation B.1

This Limitation reflects the "maximum extent practicable" source control treatment standard for prevention of storm water runoff pollution. This standard of treatment is prescribed in 40 CFR 122-26(d)(2)(iv).

Receiving Water Limitations

The receiving water limitations are the applicable water quality objectives contained in the Basin Plan.

Provision D.1

This Provision is largely self-explanatory. The Provision restates the essential theme of this Order and the Storm Water Management Program to which it refers: pollutants must not enter the storm water runoff stream, pollutant source control is the key management goal of this endeavor.

Provision D.2

The rationale for this Provision is from the same Federal regulatory source as Effluent Limitation B.1.

Provision D.3

Provision D.3 lists the topic headings included in the Storm Water Management Program.

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Provision D.4

This Provision requires the City to identify, inspect, monitor and control pollutants from industrial facilities found to be a significant source of pollutants.

Provisions D.5 and D.6

These Provisions require the City to amend the Storm Drain Ordinance to ensure compliance with the State Board General Construction Activity Storm Water Permit for construction projects greater than five acres. The City shall adopt an erosion control ordinance for construction projects less than five acres, if evaluation by the City indicates the need. Provisions D.5 and D.6 are items the City indicated they would do in their Storm Water Management Program.

Provisions D.7 and D.8

The information required in the Annual report is equivalent to that proposed in draft storm water regulations and includes information required pursuant to 40 CFR 122.41(l). The elements of the Annual Report will ensure that programs are developed and implemented at the maximum extent practicable rate, and will allow evaluation of compliance with permit conditions.

Provisions D.9 and D.10

The permit conditions have been designed to allow maximum flexibility in developing and implementing programs. The permit conditions may need to be modified as new information is developed and the permit programs mature, in order to address changed conditions. Modifications to the permit will be made pursuant to 40 CFR Parts 122.62, 122.63, and 124.5.

Provisions D.11

This Provision requires a monitoring and reporting program.

Provision D.12

Signatory requirements are pursuant to 40 CFR Part 122.41(k).

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Provision D.13

This Provision requires the Discharger to comply with all applicable "Standard Provisions".

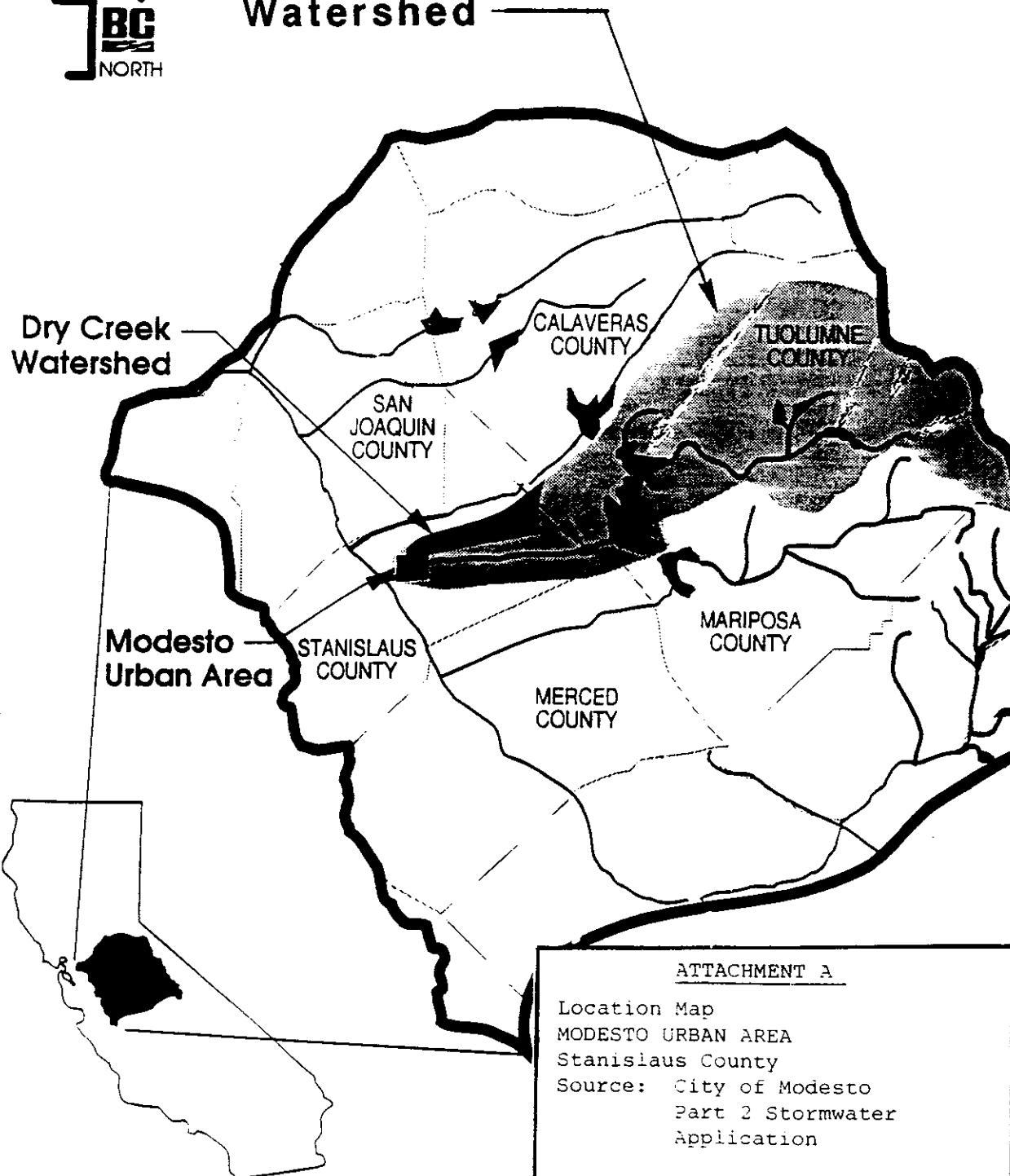
Provision D.14

NPDES permits shall be effective for a fixed term not to exceed five years pursuant to 40 CFR 122.46.

SPD:ldj:29 June 1994



# Tuolumne River Watershed



## ATTACHMENT A

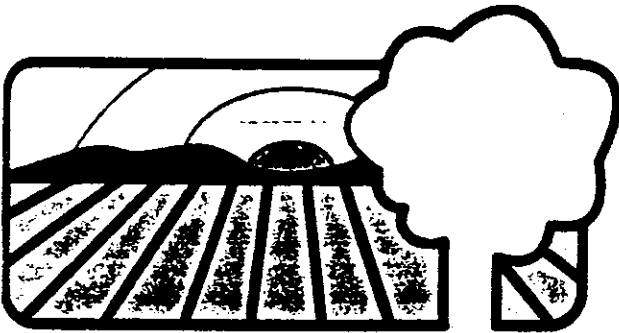
Location Map  
MODESTO URBAN AREA  
Stanislaus County  
Source: City of Modesto  
Part 2 Stormwater  
Application

Scale: No Scale



California

**Part 2 Application for  
NPDES (National Pollutant  
Discharge Elimination System)  
Municipal Stormwater Permit**



**City Of Modesto**  
Public Works &  
Transportation Department

Submitted  
May 17, 1993  
Central Valley Regional Water Quality  
Control Board







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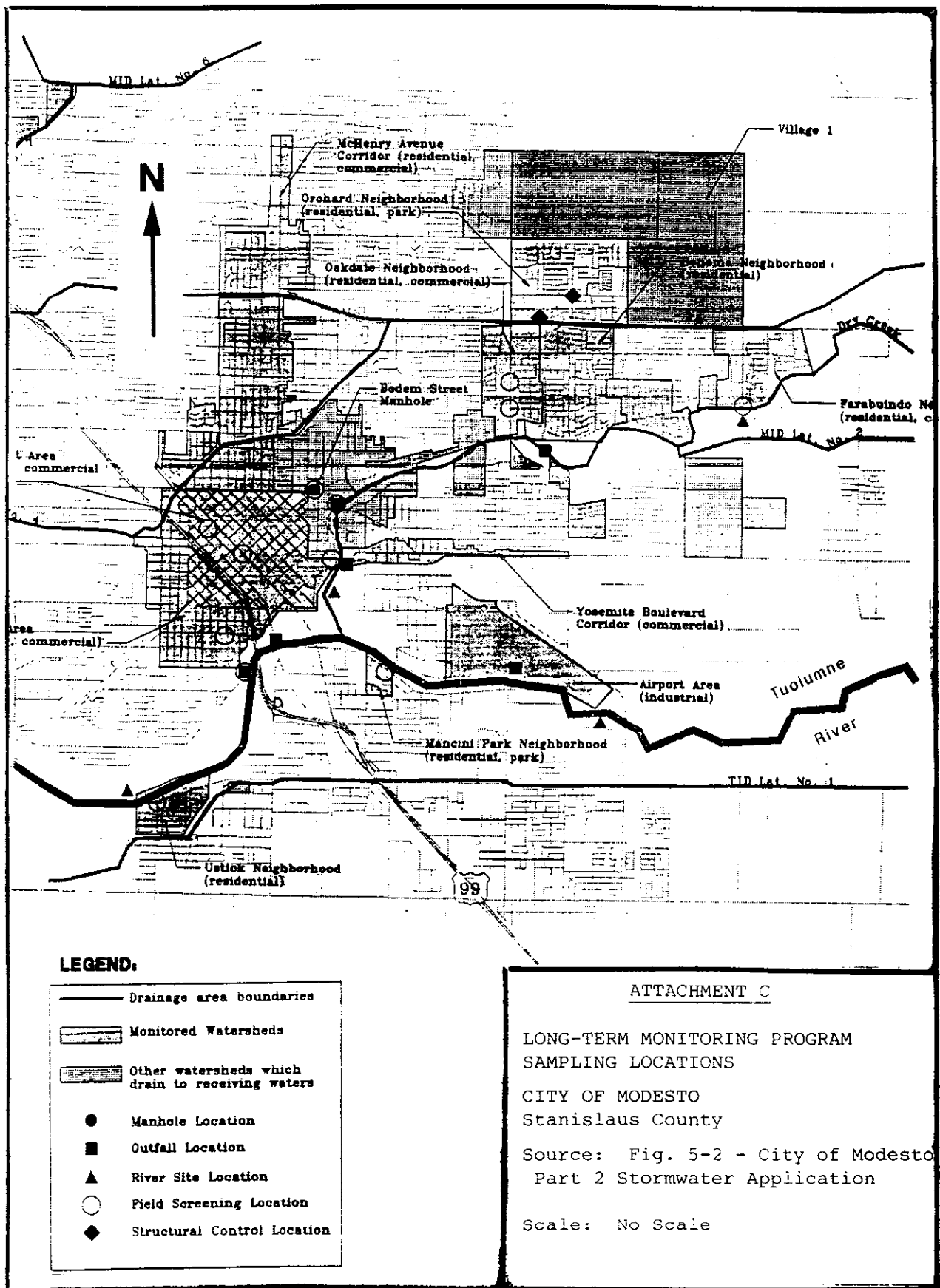
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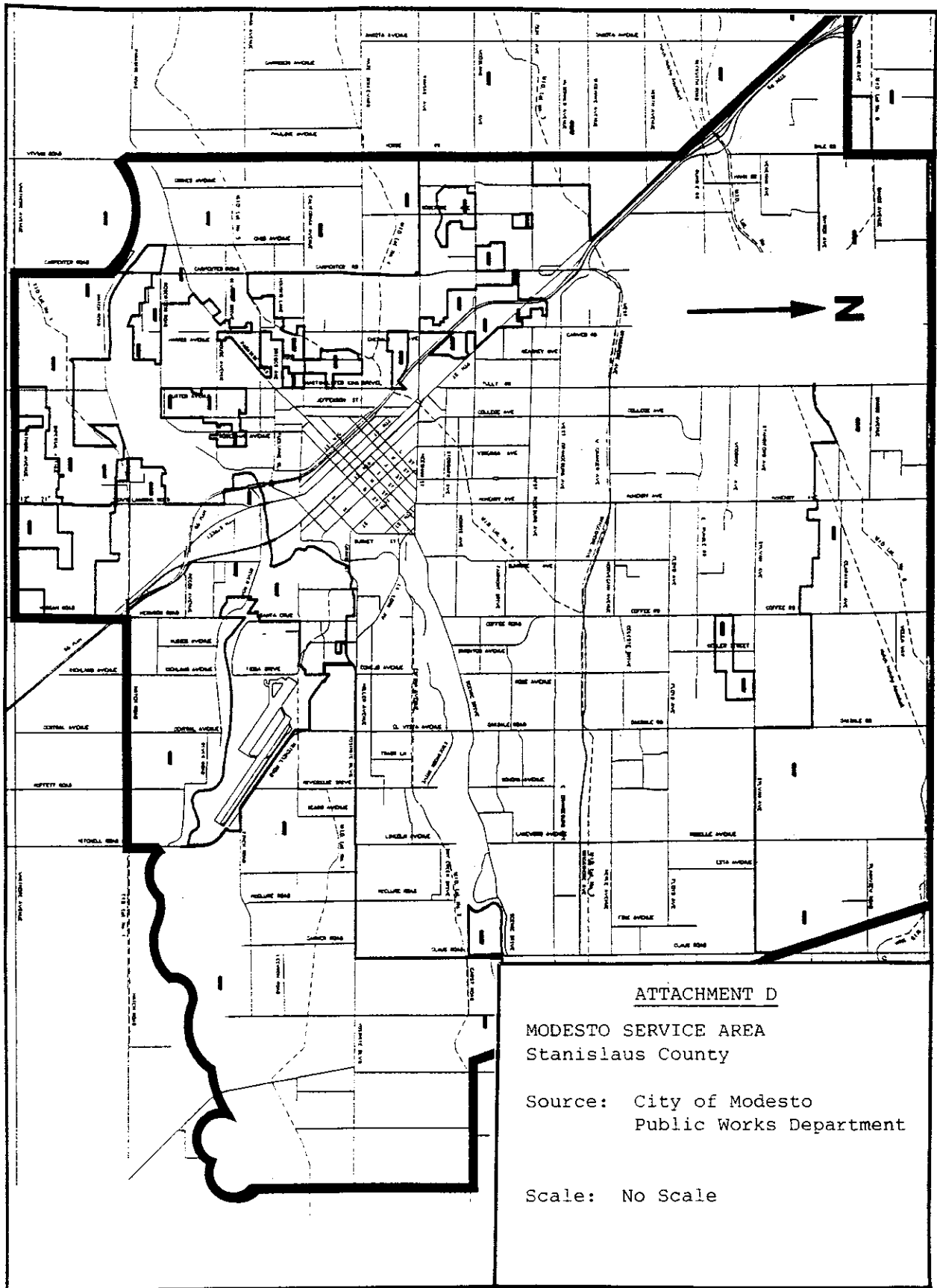


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